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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,484	04/16/2004	James H. Schaffner	B-4032DIV2 621826-1	1430
7590 06/01/2007 Richard P. Berg c/o LADAS & PARRY Suite 2100 5670 Wilshire Boulevard Los Angeles, CA 90036-5679			EXAMINER TRAN, CHUC	
			ART UNIT 2821	PAPER NUMBER
			MAIL DATE 06/01/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/826,484

Applicant(s)

SCHAFFNER ET AL.

Examiner

Chuc D. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12 and 25-29 is/are rejected.
- 7) ☒ Claim(s) 13-24,30-40 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 12 and 25-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Rabinowitz et al (USP. 6,373,432).

Regarding claim 12, Rabinowitz disclose a robust GPS system in Fig. 1 and 13, comprising:

- a plurality of GPS satellites (1) (Fig. 1) each transmitting a GPS signal (Abstract);
- a plurality of airborne GPS platforms (2) (Fig. 1), each GPS platform including a GPS receiver for receiving GPS signals from a number of visible GPS satellites (Abstract), each airborne platform also including a GPS transmitter for transmitting its own GPS signal (Abstract), the GPS signals being transmitted from the plurality of airborne GPS platforms being differentiated from the GPS signals transmitted by the visible GPS satellites (Col. 5, Line 19-35);
- at least one terrestrially (4) located GPS receiver for receiving the GPS signals transmitted by visible ones of the GPS satellites and by visible ones of said airborne GPS platforms (Abstract) (Fig. 1).

Regarding claim 25, Rabinowitz disclose a method for reducing potential interference to a GPS receiver responsive to GPS signals transmitted from a constellation of GPS satellites in Fig. 1 and 13, comprising:

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- deploying air vehicles (2) each serving as a platform for a secondary GPS position and timing reference transmitter (Col. 5, Line 25), each platform including a receiver for receiving GPS signals from the GPS satellite constellation (Abstract);

- transmitting the secondary GPS position and timing reference information from the transmitters on the air vehicles (Abstract), the secondary GPS position and timing reference information being based upon the GPS signals received from the GPS satellite constellation at each platform (Col. 4, Line 24); and

- receiving the secondary GPS position and timing reference information from the transmitters on one or more of the air vehicles at said GPS receiver (Col. 5, Line 19-35) (Fig. 13).

Regarding claim 26, Rabonowitz disclose that the GPS receiver (4) is terrestrially located (Fig. 1).

Regarding claim 27, Rabonowitz disclose that the information is transmitted from the air vehicles to the terrestrial GPS receiver in a spread-spectrum manner similar to the manner used for direct satellite to terrestrial GPS receive reception (Col. 9, Line 37).

Regarding claim 28, Rabonowitz disclose that the information is transmitted from the air vehicles to the terrestrial GPS receiver by modulation onto a carrier at a specified frequency (Col. 8, Line 11).

Regarding claim 29, Rabonowitz disclose that the air vehicles (2) are unmanned (Fig. 1).

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*Allowable Subject Matter*

3. Claims 13-24 and 30-40 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. The following is a statement of reasons for the indication of allowable subject matter:

Prior art fails to disclose or suggest in combination with the remaining claimed limitation: (a) Luneberg Lens having a spherically shaped outer surface and a spherically shaped focal surfaced from its outer surface; (b) a plurality of patch antenna elements disposed along the focal surface of Luneberg Lens; and a power combiner for combining signals received by the plurality of patch antenna elements in claims 13-24 and 30-40.

*Inquiry*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuc D. Tran whose telephone number is (571) 272-1829. The examiner can normally be reached on M-F Flex hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W. Owens can be reached on (571) 272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TC  
May 14, 2007

*Douglas W. Owens* 5/18/07

DOUGLAS W. OWENS  
SUPERVISORY PATENT EXAMINER